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APPLICANT : KOBE STEEL LTD;

INVENTOR : NARITA KENJI;

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TITLE : PRODUCTION OF TITANIUM SHEET

ABSTRACT : PURPOSE: To easily produce a titanium sheet which is excellent in seizing resistance and has uniform metallic gloss at a low cost by forming an oxidative film having specified film thickness on the surface of the titanium sheet and thereafter annealing it in the nonoxidative atmosphere to form a surface hardening layer.

CONSTITUTION: An oxidative film having $\geq 200\text{\AA}$ preferably $\geq 350\text{\AA}$ film thickness is formed on the surface of a titanium sheet. This oxidative film is preferably formed by anodization at the same time as degreasing. Thereafter this titanium sheet is annealed in vacuum or the nonoxidative atmosphere such as gaseous argon atmosphere. The oxygen contained in the oxidative film is diffused into the surface layer part by this annealing. Metallic gloss of the uppermost surface part is restored and also the whole surface layer is hardened. Thereby this method is incorporated into a conventional process and the titanium sheet is obtained which is excellent in seizing resistance at a time of forming work and has uniform metallic gloss.

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